angusta Lec.
Centrinus scutellum-album Say.
Sphenophorus pertinax Oliv.

The following were erroneously cited in the previous list (June, 1910):
Dineutes vittatus.
Mycetophagus pluriguttatus.
Attelabus nigripes.

MISCELLANEOUS NOTES ON COLLECTING IN GEORGIA.[1]

BY WM. T. DAVIS,

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As Mr. Charles W. Leng and I visited Clayton, Ga., in 1910, about a month later than in 1909, we had the pleasure of getting better acquainted with some of the resident species of Cicadas, known quite appropriately as "jar" or "July flies" by the natives. *Cicada sayi* was quite common about the town and in all the cultivated tracts that we visited. *Tettigea hieroglyphica* was still singing, but confined more to the woodland, and a third species resembling *Cicada lyricen,* which has since been named *Cicada engelhardti,* was found only in the woodland. Attracted by the songs of this insect, we could with a powerful glass see them in the trees, and note the black thorax with prominent central fulvous spot. The distribution of Cicadas will yet become as interesting a study as that of tiger beetles. Why *Cicada sayi* should occur in considerable numbers about Clayton, Ga., and be absent from parts of New Jersey, where it is generally quite common, is an interesting fact worthy of consideration.

Though we collected the same species of tiger beetles as we did in 1909, they were not as numerous, owing to the lateness of the season. The exception to this was *Cicindela unipunctata,* which was quite plentifully distributed in the woods and along the wood paths. The individuals that we have seen at Plainfield, Lakewood and Lakehurst in New Jersey, did not fly when disturbed, but at Clayton they flew almost as well as the other native species. The most interesting *Cicindela* observation was made on July 25, on the trail leading along Tuckoluge Creek, where I saw a male *Cicindela sexguttata* apparently

[1] Continued from page 82, Vol. XVIII, 1910.

in copulation with a female *Cicindela punctulata*. The pair were promptly collected to avoid chances of error in regard to sex.

We set a great many trap jars baited with "sugar" mixture in the woods, and as a result captured numerous ants and beetles and a great many specimens of Ceuthophili. The latter have been identified with reasonable certainty as *Ceuthophilus lapidicola, Ceuthophilus uhleri* and *Hadenœcus putcanus*. Among the beetles *Carabus limbatus* fell into the traps in great numbers. Later, when they were examined, it was found that there were 24 males and 49 females. A similar collection of *limbatus* had been made in June in company with Mr. Ernest Shoemaker, along the Potomac river near Washington, D. C., and contained 22 males and 49 females. A comparison of these two collections showed that the specimens from the mountains of Georgia averaged smaller than those from further north. The length of the elytra was measured with the result that Georgia specimens averaged 12.73 mm., while those from along the Potomac averaged 13.67 mm. There were many specimens with the elytra only 12 mm. in length in the Georgia lot, while there was but one of that length among those from the vicinity of Washington. Again there was none as long as 15 mm. in the Georgia collection, while there were six of that length among those from the Potomac. *Carabus* has its best and greatest development in northern latitudes.

We found a pair of *Canthon nigricornis* rolling a sheep dropping, and a *Canthon chalcites* in a decaying fungus. Fifty-eight specimens of the larger Canthons were examined, and we might have inspected several hundred, for they were very common. Of this number fifty-seven were *chalcites* and only one *lævis*. Last year *lævis* was in greater proportion. In one spring there were four *Canthon* balls that had been recently lost to their owners by rolling down hill into the water.

Near the last of the month of July, while waiting for a train at Cornelia, Ga., we rambled in a small woods and along a path where there were some *Cicindela rufiventris*. Here we also found the excrement of some small mammal, probably a skunk or an opossum, containing the wing covers and hard parts of a number of insects. In this excrement there were a number of *Canthon viridis*. This was the first time we had found it feeding, for it usually occurs on low vegetation or under loose material on the ground.

On July 11 I saw a robber-fly capture a *Cicindela sexguttata* on the trail up the side of Black Rock Mt. When the beetle was secured the fly did not alight immediately, but for a considerable time poised itself in the air, evidently thus preventing the active beetle from getting hold of any solid object with its legs. When the beetle was dead or nearly so, the fly alighted quickly enough.

Along the same mountain path I found two burrows of the brightly colored wasp *Chlorion ichneumonca.* I saw one of the wasps on the 12th of July filling up her burrow, throwing in the dirt a little at a time, and pounding it down with her head. While the pounding was in progress she made a buzzing noise, which first attracted my attention. Having finished off the surface like the surrounding ground, she departed and I dug into the nest, finding a chamber three fourths of an inch in diameter and two inches below the surface, containing two large *Atlanticus dorsalis* and one smaller one. On July 15 an *ichneumonca* wasp was found at work filling in a burrow which branched a little way down, each branch ending in a chamber six inches below the surface. One of the chambers was stored with five *Atlanticus dorsalis,* four large ones and one little one, while the other held three large *dorsalis,* two females and a male. On Long Island, N. Y., we have seen this species of wasp carrying a *Conocephalus triops* to her burrow, so it makes use of various species of Orthoptera as conditions dictate.

Experiments have shown that many insects do not get on very well in the matter of flight when their antennæ have been removed. This does not appear to be true of some of the grasshoppers, for on July 11 a large female *Hippiscus* was observed flying about very well without antennæ. Later I found a female *Schistocerca americana* without antennæ, and she also seemed none the worse for her loss and flew in a normal manner.

The day we climbed Rabun Bald Mt. we were pleased to find several nests of the mound building ant, *Formica exsectoides.* They began to appear at about four thousand feet elevation, and some of the nests were two and one half feet high. In one low mound, I found the red *exsectoides* associated with the black *Formica subsericea.* This was probably a new nest of *exsectoides,* started by temporary parasitism in the manner pointed out by Professor Wheeler. In Prince George Co., Md., *exsectoides* builds large mound nests on

ground less than 300 feet above the sea, and in New Jersey, west of Matawan, there are several low nests about 100 feet above the sea. This ant is not common in the low lands of New Jersey.

The beautiful *Argynnis diana* was flying at the time of our visit to Clayton. Two females were seen and one of the many males was captured, but they were usually in a great hurry.

As nearly all of the water is actively engaged in getting down hill in the vicinity of Clayton, there are not many pond holes and swamps, so we saw but few of the dragon flies that frequent such places. *Libellula flavida* was quite common. Two *Tachopteryx thoreyi* were seen along War Woman Creek on July 25, and one alighted on Mr. Leng's light-colored shirt. Alighting on light-colored garments appears to be a specialty with this large dragon fly, and we have known them to act in this manner on several occasions. They have also the habit of resting on the trunks of trees, where owing to their gray color they can hardly be detected. From such a place of vantage they sally forth after their unsuspecting victims.

PSAMMOCHARIDÆ: CLASSIFICATION AND DESCRIPTIONS.

By Nathan Banks,

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The Psammocharidæ are a family in the superfamily Scolioidea, which includes also the Scoliidæ, Thynnidæ, Mutillidæ, and Sapygidæ. The earlier writers on the family had no definite arrangement though they erected a number of genera, most of the species being grouped in five of these genera, *Pompilus, Priocnemis, Pepsis, Agenia,* and *Ceropales. Pompilus* and *Agenia* are preoccupied, so other names must replace them. A prime division was made on the number of submarginal cells, and this character is still used in the latest (Ashmead) classification. I do not consider it of great value, indeed one species has specimens with two cells in one wing and three in the other, while other specimens have two or three in both wings. Whether the hind tibiæ were irregularly spined, serrately spined, or